

CLAIMS:

1. A scroll compressor adapted to be used for a refrigerating system, having a container, and comprising, in the container, a scroll compressor mechanism portion including an orbiting scroll and a fixed scroll, and the motor portion for driving the compressor mechanism portion,

wherein an ammonia group refrigerant is used as a working medium, aluminum wires are used for windings in the motor portion, and the scroll compressor portion has a compression chamber which incorporates therein an injection circuit for feeding a part of high pressure refrigerant cooled by a condenser in the refrigerating system so as to restrain a temperature of the refrigerant from rising during compression stroke.
2. A scroll compressor as set forth in claim 1, wherein the aluminum wires in the motor portion are coated thereover with fluoro-resin.
3. A scroll compressor as set forth in claim 2, wherein the fluoro-resin with which the aluminum wires are coated thereover is subjected to photochemical reaction using amine compound so as to carry out surface-reforming for the fluoro-resin as a coating material so as to enhance the adherence between the aluminum wires and the coating material.
4. A scroll compressor as set forth in claim 1, wherein the windings in the motor portion are molded at their ends with dicyclopentadiene.
5. A scroll compressor as set forth in claim 1, wherein the motor portion includes a DC brushless motor.
6. A scroll compressor as set forth in claim 5, wherein stator windings in the motor portion are formed by concentrated-winding so as to enhance the working efficiency of molding of the winding ends.

7. An ammonia group refrigerant type refrigerating system comprising:
a scroll compressor composed, in a container, of a scroll compressor mechanism portion incorporating a scroll compressor mechanism portion including an orbiting scroll and a fixed scroll, and a motor portion for driving the compressor mechanism portion, aluminum wires being used for windings in the motor portion,

a condenser for condensing refrigerant discharged from the scroll compressor, and

a liquid injection circuit for feeding liquid refrigerant cooled by the condenser into a compression chamber in the scroll compressor so as to restrain a temperature of the refrigerant from rising during compression stroke,

wherein ammonia group refrigerant is used as the refrigerant, and a flow rate control means for controlling an injection flow rate so as to restrain a discharge temperature of the scroll compressor from rising is provided in the liquid injection circuit.

8. An ammonia group refrigerating type refrigerating system as set forth in claim 7, wherein the flow rate control means in the liquid injection circuit is an injection valve or an electronic expansion valve which is controlled so that a liquid injection quantity is controlled in relation to a temperature of a discharge side of the scroll compressor.

9. An ammonia group refrigerating system as set forth in claim 7, wherein the aluminum wires in the motor portion are coated thereover with fluoro-resin.